EV 356831475 US

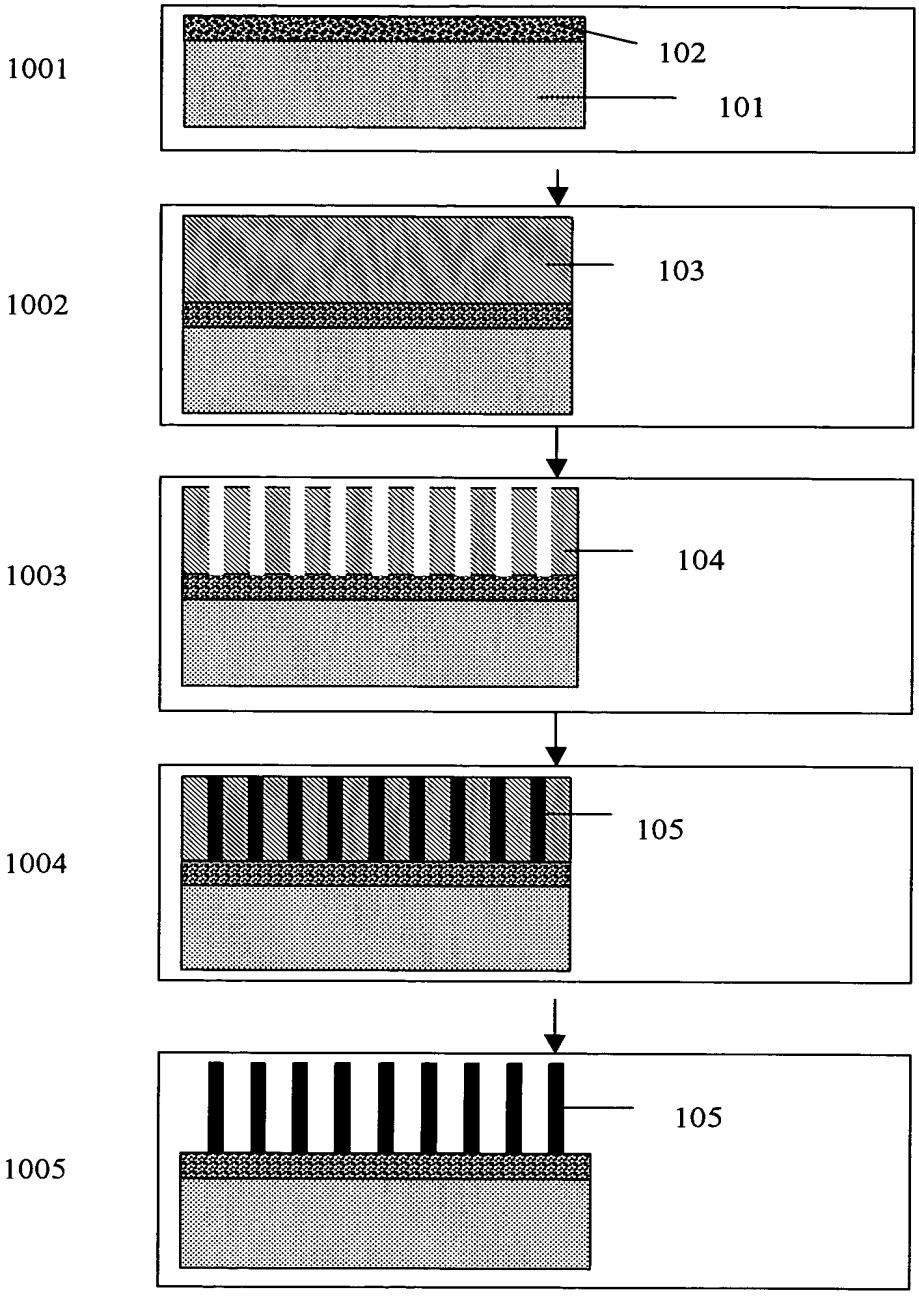


Fig. 1

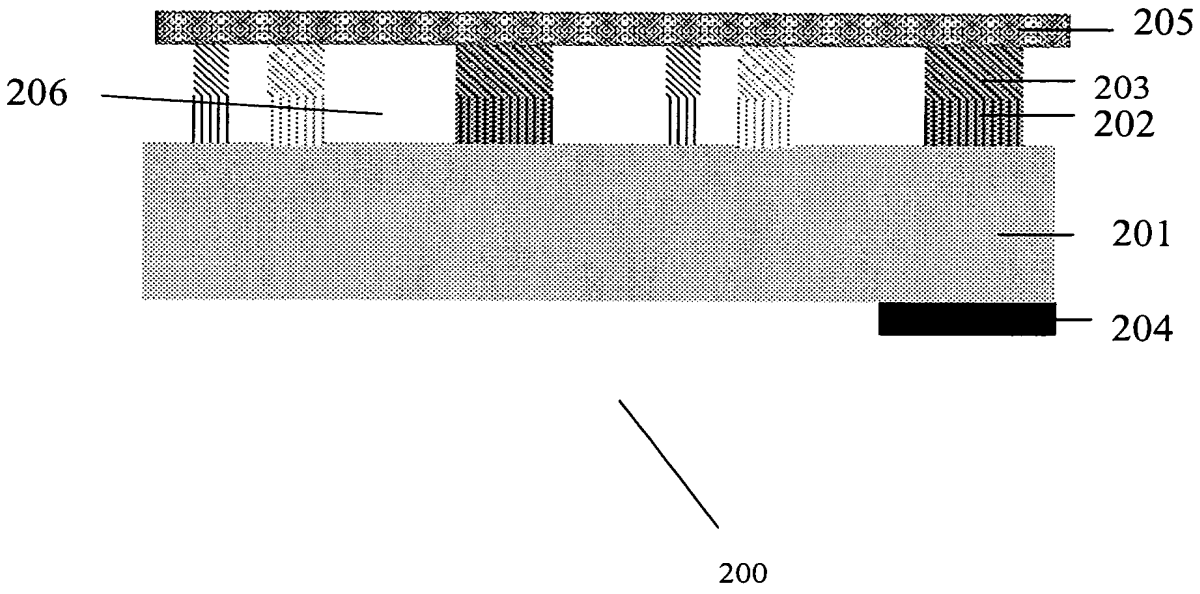


Fig. 2

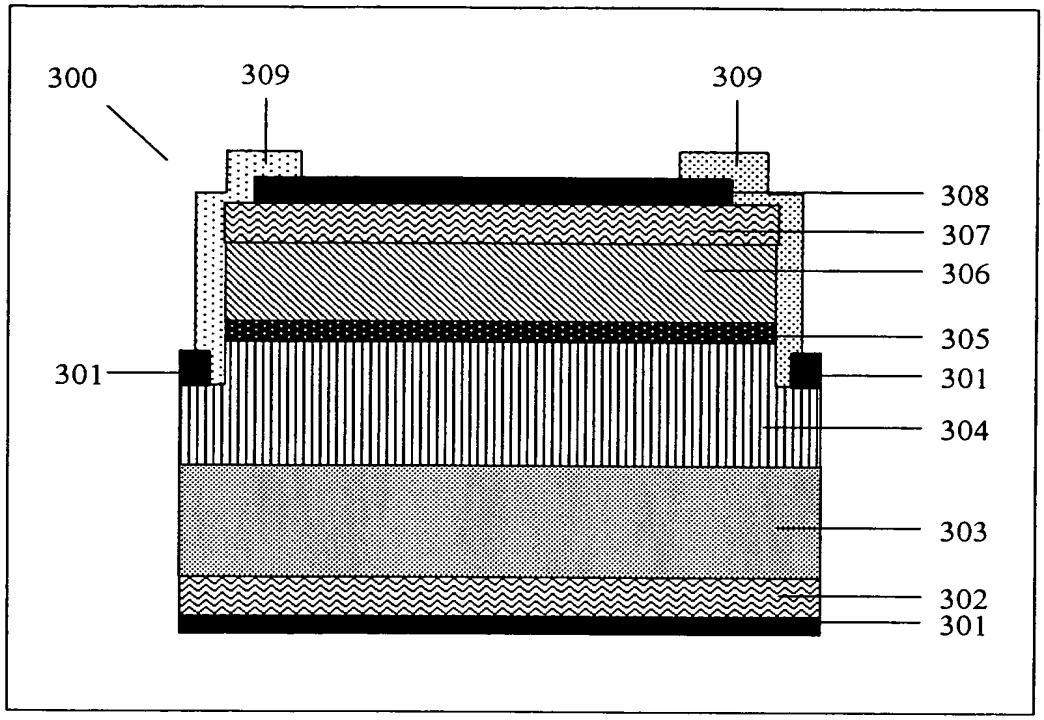
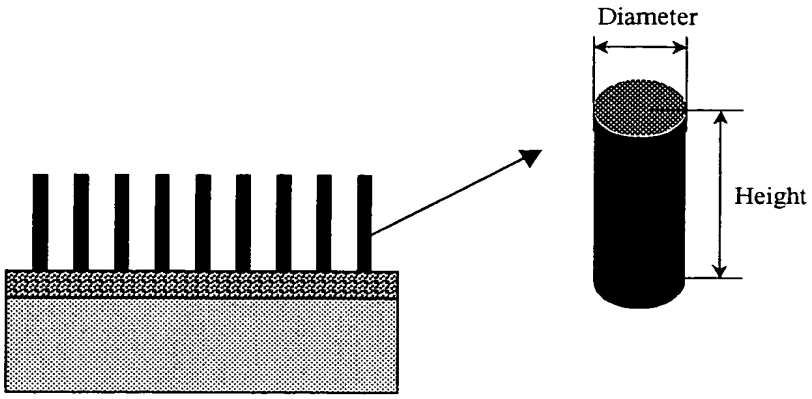


Fig. 3

A


Diameter
Height

B

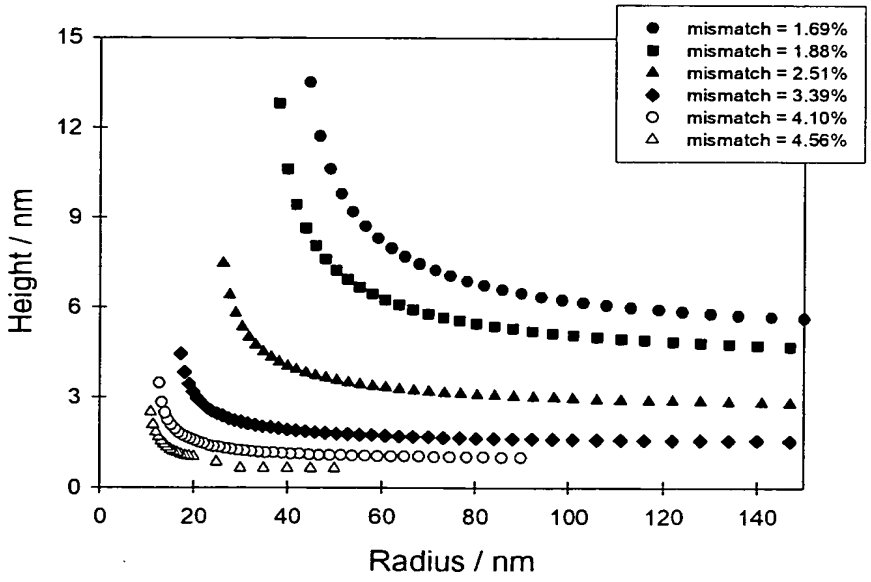
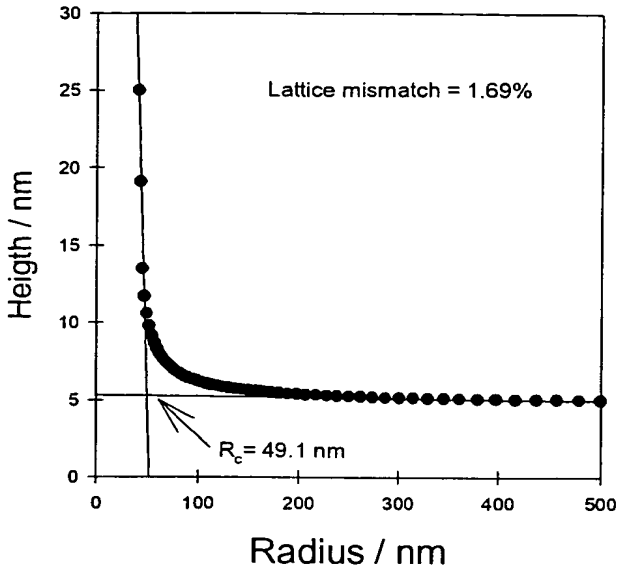

mismatch = 1.69%
mismatch = 1.88%
mismatch = 2.51%
mismatch = 3.39%
mismatch = 4.10%
mismatch = 4.56%
Height / nm
Radius / nm
0
3
6
9
12
15
0
20
40
60
80
100
120
140

Fig. 4

A


Lattice mismatch = 1.69%
Heigth / nm
Radius / nm
R_c = 49.1 nm
0
5
10
15
20
25
30
0
100
200
300
400
500

B

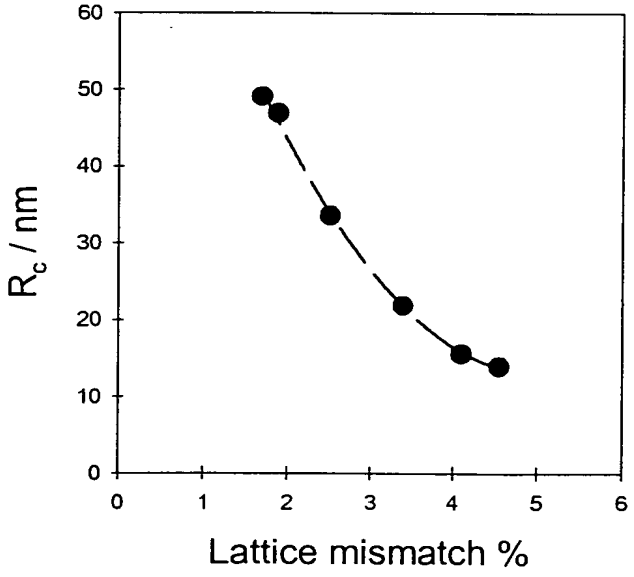

R_c / nm
Lattice mismatch %
0
10
20
30
40
50
60
0
1
2
3
4
5
6

Fig. 5

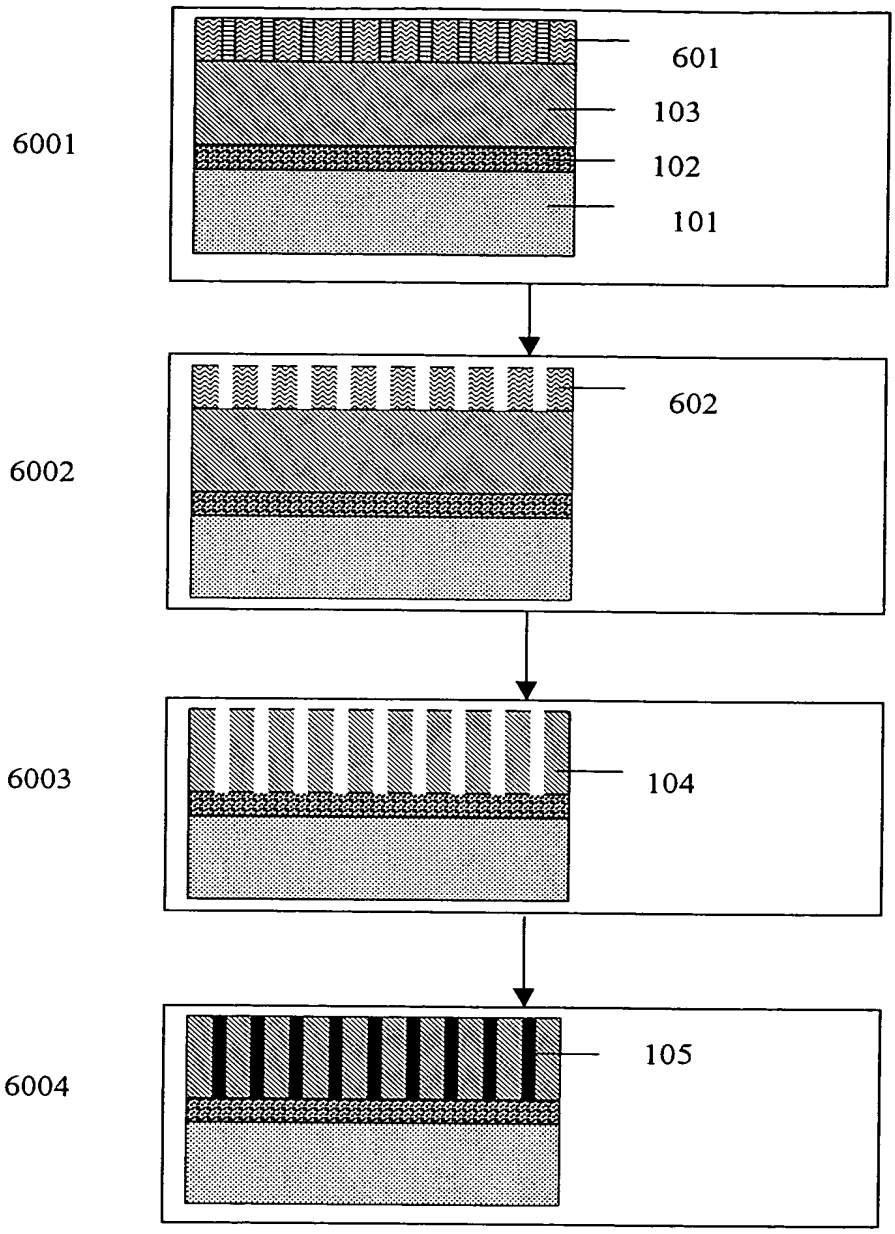


Fig. 6

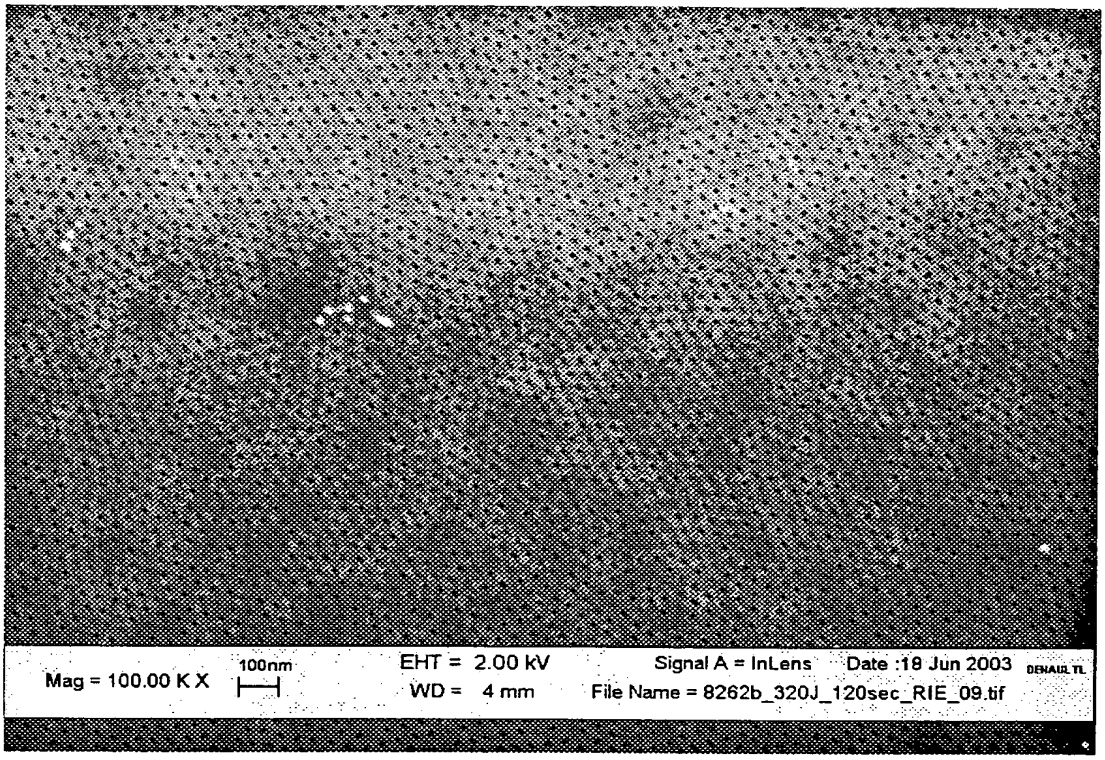
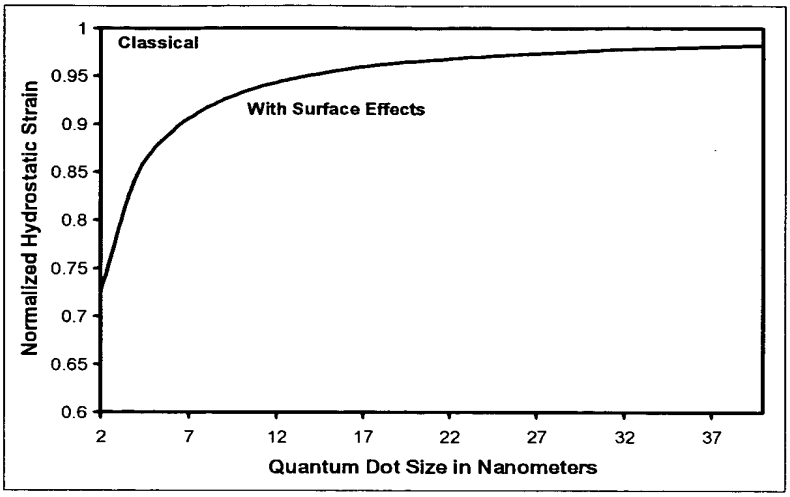

Mag = 100.00 K X
100nm
EHT = 2.00 kV
WD = 4 mm
Signal A = InLens
File Name = 8262b_320J_120sec_RIE_09.tif
Date :18 Jun 2003
DEFAULT TL

Fig. 7

A


Classical
With Surface Effects
Normalized Hydrostatic Strain
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
2
7
12
17
22
27
32
37
Quantum Dot Size in Nanometers

B

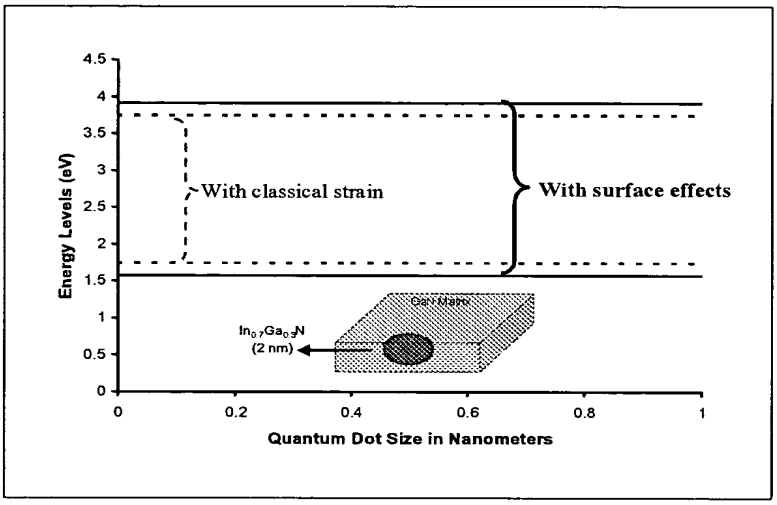

With classical strain
With surface effects
Energy Levels (eV)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0
0.2
0.4
0.6
0.8
1
Quantum Dot Size in Nanometers
In0.7Ga0.3N
(2 nm)
GaN Matrix

Fig. 8

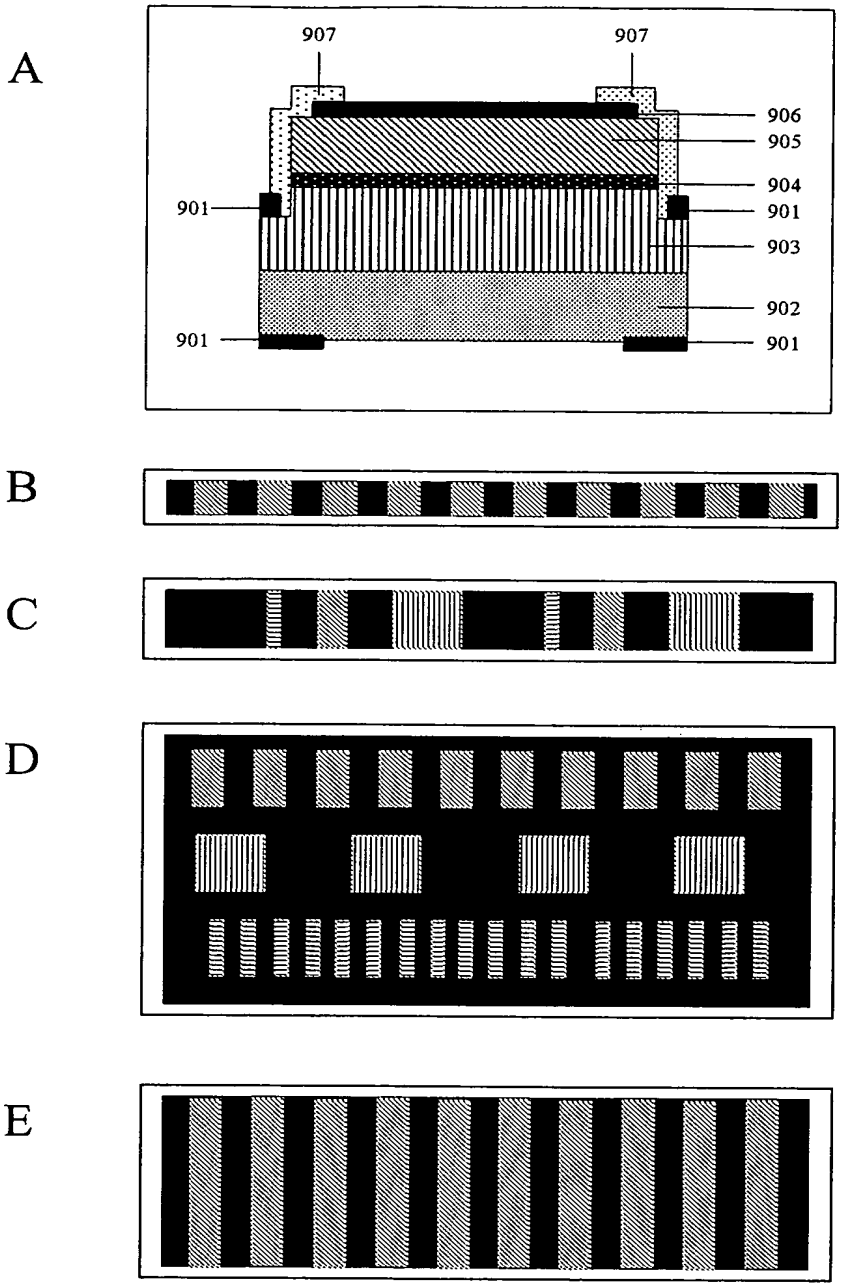


Fig. 9